

REMARKS

The application has been reviewed in light of the Office Action dated May 29, 2008. Claims 1, 4-16, 19-21, 23 and 25-34 were pending, with claims 7, 8 and 10-13 having been withdrawn by the Patent Office from consideration. Claims 2, 3, 17, 18, 22 and 24 were previously canceled, without prejudice or disclaimer. By this Amendment, claims 7, 8 and 10-13 have been canceled, without prejudice or disclaimer to Applicants' right to pursue the canceled claims in one or more divisional or continuation applications. Furthermore, claims 6, 16, 19, 20 and 25-34 have been canceled and claims 1, 4, 5, 9, 14, 15, 21 and 23 have been amended to clarify the claimed invention and to place the claims in better form for examination. Accordingly, claims 1, 4, 5, 9, 14, 15, 21 and 23 are presented for examination, with claims 1 and 21 being in independent form.

Claims 1, 4-6, 11, 14-16, 19-21, 23 and 25-34 were objected to as having informalities. By this Amendment, claims 6, 11, 16, 19, 20 and 25-34 have been canceled and claims 1, 4, 5, 14, 15, 21 and 23 have been amended hereinabove to remove the informalities. Accordingly, withdrawal of the objections to claims 1, 4-6, 11, 14-16, 19-21, 23 and 25-34 is respectfully requested.

(I) Claims 1, 5, 6, 16, 19 and 20 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over U.S. Patent No. 5,270,810 to Nishimura (hereinafter "Nishimura") in view of U.S. Patent No. 4,755,873 to Kobayashi (hereinafter "Kobayashi") and U.S. Patent No. 6,968,119 to Kaku (hereinafter "Kaku"). (II) Claim 4 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kobayashi, Kaku and U.S. Patent No. 7,339,620 to Yamagishi et al., (hereinafter "Yamagishi"). (III) Claim 9 was rejected under 35 U.S.C. §103(a) as being allegedly

unpatentable over Nishimura in view of Kobayashi, Kaku and U.S. Patent No. 5,825,982 to Wright et al., (hereinafter "Wright"). (IV) Claim 14 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kobayashi, Kaku and U.S. Patent No. 5,260,795 to Sakai et al., (hereinafter "Sakai"). (V) Claim 15 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kobayashi, Kaku and U.S. Patent No. 6,243,531 to Takeuchi et al., (hereinafter "Takeuchi"). **(VI) Claims 21 and 23 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Kobayashi in view of Nishimura and Kaku.** (VII) Claims 25, 27, 28 and 32-34 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kaku. (VIII) Claim 26 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kaku and Yamagishi. (IX) Claim 29 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kaku and Wright. (X) Claim 30 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kaku and Sakai. (XI) Claim 31 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Nishimura in view of Kaku and Takeuchi.

Applicants have carefully considered the Examiner's comments and the cited art, and respectfully submit that independent claims 1 and 21, as amended, are patentable over the cited art for at least the following reasons.

The claimed invention in independent claim 1 provides an image recording apparatus for an endoscope such that an optimal recording mode is selected based on the state of the image displayed. To clearly distinguish the claimed image recording apparatus from the cited references, independent claim 1 has been amended to recite:

1. An image recording apparatus for an endoscope, comprising:
 - a display device on which the image is displayed;
 - an operation section including a freeze button for freezing a motion image displayed on the display device, and a recording button for instructing start of image recording; and
 - a control circuit including:
 - a function which is set to a motion image recording mode for recording the motion image when the motion image is displayed on the display device, and records the motion image onto a recording medium when image recording is instructed using the recording button of the operation section;
 - a function for recording the motion image onto a recording medium when image recording is instructed using the recording button of the operation section;
 - a function for switching the setting from the motion image recording mode to a still image recording mode for recording a still image when the motion image displayed on the display device is frozen using the freeze button; and
 - a function for recording the still image onto the recording medium in the still image recording mode when image recording is instructed using the recording button of the operation section in a state where the motion image displayed on the display device is frozen using the freeze button.

Nishimura describes an electronic endoscope configured to display a freeze-picture image stored in memory before a freeze display mode is commanded.

In Nishimura, RGB field signals produced by CCD 6 are processed and stored in a field memory circuit 23. Picture data of the RGB field signals are read out from the field memory circuit 23 and passed through noise reducers 27R, 27G and 27B which have the function of sensing relative motions of the subject. As the electronic endoscope operates in a motion picture display mode, picture data are supplied to a display in the form of video signal.

Nishimura states in column 6, lines 3-12, that even if the processor 20 is operating in the motion picture display mode, the motion signals from the motion detection means 32, utilizing the motion detecting functions of the noise reducers 27R, 27G and 27B are sequentially fed to the still image control circuit 35, taking the picture data into the still image memory circuit 34 when the motion signal indicates that the subject is in a still state or in a motion of a negligible degree in terms of obtaining a still picture of satisfactory quality.

Further, Nishimura states in column 6, lines 21-24, that every time the still picture data in the still image picture memory 34 is rewritten in the manner described above, the same picture signal is fed to and recorded in an external memory 38 through D/A converter 39.

Still further, upon depressing a freeze button, the endoscope is manipulated to select the freeze display mode. Nishimura states in column 6, lines 25-40, that a freeze command is then supplied to the still image control circuit 35 from the input terminal 37. In response to this input signal, the still image control circuit 35 sends out a signal to the switching means 36 to change the switch elements 36R, 36G and 36B into positions of the still display mode simultaneously. Concurrently, a data renewal inhibiting signal is sent to the respective memories 34R, 34G and 34B of the still memory circuit 34 from the still image control circuit 35 to inhibit renewal of the picture data, and concurrently the contents of these memories are read out and fed to the monitor device after noise reduction through the noise reducers 27R, 27G and 27B to display a freeze-picture image thereon.

Yet still further, Nishimura, column 6, lines 42-48, states that a freeze-image of a subject of an aimed locality or condition is displayed on the monitor device according to the picture data which had been stored in the still image memory circuit 34 immediately before the manipulation of the freeze button.

In summary, Nishimura describes a still image memory circuit 34 that is selectively supplied with motionless picture signals. Even if the processor is operating in the motion picture display mode, renewal and rewriting of data in the still picture memory circuit 34 takes place when it is detected that the subject is in a still state or in a state of negligibly small motion. When a freeze display mode is commanded by an operator, rewriting of data to

the still picture memory circuit is inhibited, and the still image data stored on the still image memory circuit 34 immediately before the manipulation of the freeze button is displayed on the display monitor.

Applicants respectfully submit that Nishimura does not teach or suggest a freeze button for freezing a motion image displayed on the display device, as provided in amended independent claim 1.

The freeze button described in Nishimura commands switching means 36 to change the switch elements 36R, 36G and 36B into positions for a still display mode. In the still display mode, renewal of picture data of still images to still image memory circuit 34 is inhibited and concurrently the contents of the still image memory circuit 34 is read out and fed to monitor devices to display a freeze-picture thereon. Stated another way, operation of the freeze button described in Nishimura commands the display of a still image stored in the still image memory circuit 34 but does not freeze a motion image displayed on the display device.

Applicants further submit that Nishimura does not teach or suggest a control circuit including a function for switching the setting of the control circuit from a motion image recording mode for recording the motion image when the motion image is displayed on the display device to a still image recording mode for recording a still image when the motion image displayed on the display device is frozen using the freeze button, as provided in amended independent claim 1.

Nishimura does not teach or suggest this function because (i) Nishimura does not disclose or suggest a motion image recording mode, and (ii) Nishimura, at best, can be described as being perpetually in a still image recording mode. Nishimura simply does not

teach or suggest the recording of motion image. Moreover, as discussed above, Nishimura states that even if the processor 20 is operating in a motion picture display mode, picture data is taken into the still image memory circuit 34 when the motion signal indicates that the subject is in a still state or in a motion of a negligible degree. Every time the still picture data in the still image picture memory 34 is rewritten, the same picture signal is fed to and recorded in the external memory 38.

Kaku, as understood by Applicants, relates to an electronic camera including a mode changing switch 14. A user must manually select via switch 14 one of a still image recording mode, snapshot recording mode and a motion image recording mode. Upon powering on the electronic camera, data acquired by a CCD is first converted into a low resolution image data and then encoded as a video signal that is displayed on a monitor. When the user operates a shutter button, the previously selected recording mode is determined. Where a still image recording mode was previously selected, a still image recording process is executed. Alternatively, where a motion image recording mode was selected, a motion image recording process is executed.

Applicants respectfully submit that Kaku does not teach or suggest a control circuit including a function for switching the setting from a motion image recording mode for recording the motion image when the motion image is displayed on the display device to a still image recording mode for recording a still image when the motion image displayed on the display device is frozen using the freeze button, as provided in amended independent claim 1. According to Kaku, whether the camera is in a motion image recording mode or a still image recording mode is pre-determined by the user's manual selection via mode changing switch 14. Operation of the shutter button does not operate to freeze a motion

image displayed on the monitor. Furthermore, operation of the shutter button also does not operate to switch the setting from a motion image recording mode to a still image recording mode because the recording mode has already been pre-determined by the user prior to operation of the shutter button.

Kobayashi, as understood by Applicants, relates to an endoscope system comprising remote control switches. A user can start recording by operating the remote control switches.

Applicants respectfully submit that Kobayashi also does not teach or suggest a control circuit including a function for switching the setting from a motion image recording mode for recording the motion image when the motion image is displayed on the display device to a still image recording mode for recording a still image when the motion image displayed on the display device is frozen using the freeze button, as provided in amended independent claim 1.

Applicants further respectfully submits that none of the references cited by the Examiner teaches or suggests, individually or in any permissible combination, each and every feature of the claimed image recording apparatus recited in amended independent claim 1.

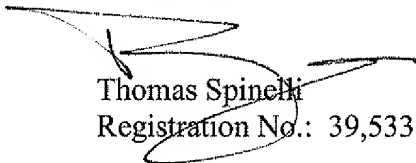
For at least the foregoing reasons, it is respectfully submitted that amended independent claim 1 is patentably distinct over the cited art. Independent claim 21 is believed to be patentable over the cited art for at least similar reasons.

For the above-stated reasons, Applicants respectfully submit that independent claims 1 and 21, and the claims depending therefrom, are patentable over the cited art.

Accordingly, withdrawal of the rejection of claims 1, 4, 5, 9, 14, 15, 21 and 23 under 35 U.S.C. §103(a) is respectfully requested.

In view of the amendments to the claims and remarks hereinabove, Applicants submit that the application is now in condition for allowance. Accordingly, Applicants earnestly solicit the allowance of the application. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



Thomas Spinelli
Registration No.: 39,533

Scully, Scott, Murphy & Presser, P.C.
400 Garden City Plaza, Suite 300
Garden City, New York 11530
(516) 742-4343
TS/WC:cm